



No. 159 October - December 2018 ISSN 0972-2386

cadalmin

CMFRI Newsletter

<http://www.cmfri.org.in>



Southern Fisheries Ministers' Conference held at ICAR-CMFRI, Kochi

see page 3



हर कदम, हर उंगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

Indian Council of Agricultural Research
CENTRAL MARINE FISHERIES RESEARCH INSTITUTE
P.B. No. 1603, Ernakulam North P.O., Kochi - 682 018, Kerala, India

കടലമീൻ

കടൽമീൻ

കടൽമീൻ

കടൽമീൻ

കടൽമീൻ

കടൽമീൻ

കടലമീൻ

കടലമീൻ

Contents

South Indian Fisheries Ministers' Conference organised at CMFRI	3
Research Highlights	6
Workshops	8
Exhibitions	11
Training	12
Official Language Implementation	14
Swacch Bharat Activities	14
KVK News	16
Award and Recognitions	16
Programme participations	17
Personnel	18

Published by

Dr. A. Gopalakrishnan
Director

ICAR-Central Marine Fisheries Research Institute
Post Box No. 1603, Ernakulam North P.O.
Kochi - 682 018, Kerala, India
Telephone: 0484-2394867
Fax: 91-484-2394909
E-mail: director@cmfri.org.in
Website: www.cmfri.org.in

Editor

Dr. U. Ganga

Editorial Committee

Dr. R. Ratheesh Kumar
Dr. Livi Wilson
Dr. N. S. Jeena
Smt. E. K. Uma
Smt. R. Vandana

Assisted by

Shri Arun Surendran
Shri C. V. Jayakumar
Shri P. R. Abhilash

DIRECTOR SPEAKS



Adherence to healthy fishing practices, responsible fisheries management templates and a responsive fisheries governance hold the key to a vibrant and sustainable marine fisheries sector in India. Stakeholders across the spectrum, from fishermen to administrators play a crucial role to enable the country tap its rich marine fisheries sector in a sustainable and economically befitting manner. Against this background the southern fisheries' ministers conference was organized recently with official representatives from several maritime states of India. The institute actively supported this venture and contributed scientific inputs at this forum.

Inauguration of the National broodstock facility for pompano and the scaled up hatchery facilities for mussels at the Vizhinjam Research Centre of the institute are expected to further boost the linkages between research and mariculture activities. The institute has played a pioneering role in developing mariculture sector in the country. This has enabled its active participation in the preparation of the draft of a National Mariculture Policy, which was presented before stakeholders for feedback, in the various maritime states of India. It is expected that based on this activity, the eagerly awaited robust policy framework for mariculture sector in India would soon be in place. The institute also conducted several training programmes and short courses related to marine fisheries. We should strive to make more such meaningful and positive impacts on the development of marine fisheries sector with innovative ideas and programmes.

With best wishes,

A. Gopalakrishnan
Director

About ICAR-CMFRI

The Central Marine Fisheries Research Institute, Kochi, is a premier research Institute under the Indian Council of Agricultural Research, devoted to research and training in marine fisheries and mariculture.

ICAR-CMFRI has three Regional Centres viz., Mandapam Camp, Visakhapatnam and Veraval and eight Research Centres located along the Indian coastline, catering to the marine fishery policy needs of all maritime states of the country.



South Indian Fisheries Ministers' Conference organised at CMFRI



Inauguration of Southern Fisheries Ministers' Conference in Kochi

The two-day conference of fisheries ministers from south Indian states, was held on 10th and 11th November 2018 at ICAR-CMFRI, Kochi. It was jointly organised by the Fisheries Department, Government of Kerala, ICAR-Central Marine Fisheries Research Institute, ICAR-Central Institute of Fisheries Technology and Kerala University of Fisheries and Ocean Studies (KUFOS). The Hon'ble Chief Minister of Kerala, Shri. Pinarayi Vijayan inaugurated the conference. Fisheries ministers and senior officials from Kerala, Maharashtra, Andhra Pradesh, Goa, Karnataka, Tamil Nadu, Puducherry, Lakshadweep UT and Andaman and Nicobar UT attended the meet. During the stakeholder meeting that followed, representatives of fishermen associations presented the issues faced by them for the attention of the fisheries ministers. Dr. J. K. Jena, Deputy Director General, ICAR, Dr. Paul Pandian, Fisheries Development Commissioner, Government of India, Dr. A. Ramachandran, Vice Chancellor, KUFOS, Dr. A. Gopalakrishnan, Director ICAR-

CMFRI, Dr. C. N. Ravisankar, Director, ICAR- CIFT, Venkatesapathy S., Director of Fisheries, Kerala, Dr. P. Pravin, Additional Director General (Marine fisheries) ICAR attended the conference.

The malayalam translation of the Kerala Marine Fisheries Act (KMFA) prepared by Dr. C.Ramachandran and team from the institute, based on the request of the state's Fisheries Department to project it among all stakeholders and especially the fishermen

community, was also released on the occasion.

Recommendations to ensure good governance and sustainable fisheries sector made at the workshop were as follows.

- Implement Minimum Legal Size (MLS) for marine capture fisheries sector as recommended by ICAR - CMFRI.
- Strengthen fisher folk co-operatives



Release of KMFA translation by Smt. Mercikuttyamma, Hon'ble Fisheries Minister, Govt. of Kerala

and equip them to undertake deep-sea resource specific fishing.

- Plan training programmes for deep sea fishing implemented under the Government of India's Blue Revolution Scheme and encourage the fisherfolk to participate in such training programmes
- Ban destructive fishing practices such as bull trawling/pair trawling and use of poisons, chemicals etc. by enforcing appropriate legislations.
- Restrict fishing based on Fish Aggregating Devices (FADs) and allow use of LED lights in fishing only for squid jigging.
- Adopt recommended mesh sizes for fishing nets and also enforce adoption of square mesh cod ends for trawl nets as recommended by

ICAR- Central Institute of Fisheries Technology (CIFT).

- Regulate fishing boat building yards and net manufacturing units by enforcing mandatory registration and licensing under MFRAs as already done in Tamil Nadu and Kerala. Encourage units to adhere to prescribed quality standards and adopt designs developed by ICAR-CIFT.
- Prevent illegal, unreported and unregulated (IUU) fishing and take measures to enforce spatial zoning regulations.
- Take effective steps towards control of plastic pollution of marine waters. Programmes similar to the Suchitwa Sagaram scheme being implemented by Government of Kerala to control

marine littering may be implemented in other maritime states also.

- Strictly enforce the uniform ban on fishing during monsoon period.
- Improve safety of navigation and fishing operations by making use of Automatic Identification System (AIS) and Vessel Monitoring Systems (VMS) mandatory in fishing vessels.
- Undertake mandatory accreditation of fish hatcheries to ensure good quality fish seeds for aquaculture.
- Adopt participatory approach in fishery management by amending the Marine Fishing Regulation Act (MFRA) of all maritime states.
- Constitute Fisheries Harbour Management Societies for efficient management of fishing harbours.

Mahila Kisan Divas Celebrated



Participants of Mahila Kisan Day Celebration



Women fish farmers honored on Mahila Kisan Divas

Mahila Kisan Divas-2018, for the women fish farmers and entrepreneurs engaged in fisheries sector was celebrated on 15th October 2018 at ICAR-CMFRI headquarters. The program was co-ordinated by the Socio Economic Evaluation and Technology Transfer Division and Agricultural Technology Information Centre of the institute led by Dr. Vipinkumar V. P., Dr. Aswathy and Dr. Reshma Gills. 87 women participated in the event and shared their experiences. Selected women farmers and entrepreneurs were honored on the occasion.



Dr. V. Kripa presenting mementos to winners of painting competition

A panel discussion headed by Dr. V. Kripa, Dr. Shoji Joseph and Dr. Rema Madhu on the various issues faced by the fisherwomen in fisheries and related activities shared their knowledge related to mariculture, cage fish farming, bivalve

farming and related activities with the participants. Dr. Vinita Murali, Gynaecologist, Department of Obstetrics and Gynaecology, Amrita Institute of Medical Sciences, Kochi delivered a lecture on general health issues of

women followed by a discussion session. A painting competition for VHSE girl students on the topic 'Women Empowerment in Fisheries Sector' was also organized and winners were awarded certificates at the function.

Harvest of cultured seaweed

ICAR-Tuticorin Research Centre of CMFRI organised harvest of cultured Seaweed at Tsunami Nagar, Thoothukudi District under the project National Innovations on Climate Resilient Agriculture (NICRA) on 11th December 2018. Dr. P. P. Manojkumar, Scientist-in-Charge of Tuticorin Research Centre welcomed all the participants. As a climate resilient farming practice it is expected to combat the effect of carbon emission as well as an additional livelihood means for farmers. Mrs. Anju, Assistant Director, MPEDA, Thoothukudi flagged-off the seaweed harvest from the culture plots. Farmers were able to realize a yield of 10 tonnes of wet weight (4-5 fold growth of seaweed) from a single plot with 100 numbers of monolines in a culture period of 30-35



Harvest of seaweeds at Thoothukudi

days. A net revenue gain of ₹ 35,000- 40,000/- per plot could be achieved with the farm-gate price of

harvested seaweed being ₹ 4/kg (wet basis) and ₹ 40 per kg (dried) with 25-30 % of moisture level.

Seabass harvest from sea cages off Thoothukudi

ICAR-CMFRI-Tuticorin Research Centre co-ordinated along with State Fisheries Department the grow-out culture of Seabass at the sea cages in Keezhavaipar and Sippikulam under the NFDB funded project on Sea cage farming. The centre in the initial phase, imparted sea-cage culture training to the selected fishers of Keezhavaipar and Sippikulam villages and provided scientific guidance on sea-cage

farming practices. Financial support was given to ten selected fisher groups (a single group consisting of 4 persons) by the fisheries department, Tuticorin to fabricate 10 nos of GI sea-cages of 6 m diameter with inner net, and for procurement of sea bass seed and feed. The seabass fingerlings were stocked at 750 numbers per cage on the month of January 2018 grow-out culture was run

for 10 months. The harvest conducted during 1-3 November 2018 yielded 2100 kg of fishes were harvested from 6 sea cages. The fishes had grown to an average size of 1.4 ± 0.280 kg and sold for a farm gate price of ₹ 430 per kg. The individual fisher groups got an average benefit of ₹ 1, 28,000 from the single sea-cage.

Cadalmin™ Anti-hypothyroidism extract (Cadalmintm ATe) from seaweed commercialized

Cadalmin™ Anti-hypothyroidism extract (Cadalmintm ATe), a nutraceutical product developed by ICAR-Central Marine Fisheries Research Institute with activity against hypothyroid dysfunctions from seaweeds has been commercialized with Vandana Luthra Curls and Curves (VLCC), a leading Indian MNC in wellness, with



manufacturing facilities in India and Singapore. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI signed an exclusive license agreement with VLCC Group on 29th November 2018, for its commercial production and marketing with a license fee of ₹ 7.10 lakhs and 5% royalty.

Maiden harvest of Indian pompano cultured in pond

Hatchery produced seeds of Indian pompano were experimented for grow-out culture feasibilities in earthen pond at Bhavedevarapally, Krishna District, Andhra Pradesh under All India Network Project on Mariculture. The maiden harvest of the pond raised Indian Pompano was done on 23rd December, 2018. Early fingerlings of 1.5 to 2.0 g sizes were stocked in a hapa with 0.8 mm mesh size placed in an earthen shrimp pond having 1.5m water depth and 28-30 ppt water salinity. After three months,

when the fish fingerlings reached 50 g in size and thereafter, all the fish were released in the same pond. During the pond culture period of six months, 3 mm sized pelleted feed consisting of 40% protein and 10% fat was used. The fishes were harvested during December and a total of 850 kg fishes were sold at ₹ 335/kg. Initial pond culture experiments of Indian pompano revealed the fish to possess good growth potential in the pond when fed with pelleted feed. However, sensitivity towards low

dissolved oxygen was observed. Growth was higher when the fishes were stocked in the hapas in the pond, than when they were directly released into the pond. This finding indicates that the fish can be co-cultured with *Litopenaeus vannamei*. This is the first culture experiment in pond reported for silver pompano, and further experiments are in progress for determining optimum stocking density and other culture protocols.

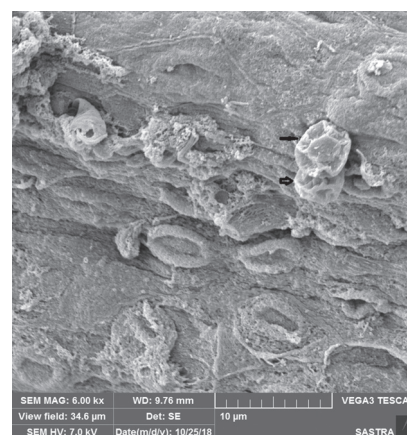
(Reported by Visakhapatnam Regional Centre)

Parasitic ciliate infestation in silver pompano fingerlings treated

Acute mortality was investigated in silver pompano fingerlings in a private hatchery in Andhra Pradesh with the clinical signs of surfacing, disoriented swimming behavior during 7th to 10th August 2018. Affected fingerlings showed redness of the operculum and settled at the bottom of the tank. Gross examination of the fish revealed wound with profuse mucous secretions from the gill and in severely affected fingerlings bleeding from the gill. Microscopic examination of gill revealed gill ciliates identified as *Trichodina* sp firmly attached to the gill lamellae. A formalin bath of 200-250 ppm for 60 minutes for 3 times

a day at 3 hours interval could save the stock. Advice to shift the fingerlings from hatchery to hapas in a pond and to apply a commercial product containing combination of Formaldehyde, Glutaraldehyde and, Benzalkonium chloride, 5 liters/ hectare in 1 meter water depth was given. Giving supplements of immunostimulants along with the feed for 3 weeks to improve the fingerlings defense mechanism was also done.

(Reported by P. Rameshkumar, R. Jayakumar, G. Tamilmani, M. Sakthivel, B., K. K. Anikuttan & M. Sankar Mandapam Regional Centre & A. K. Abdul Nazar Madras Research Centre)

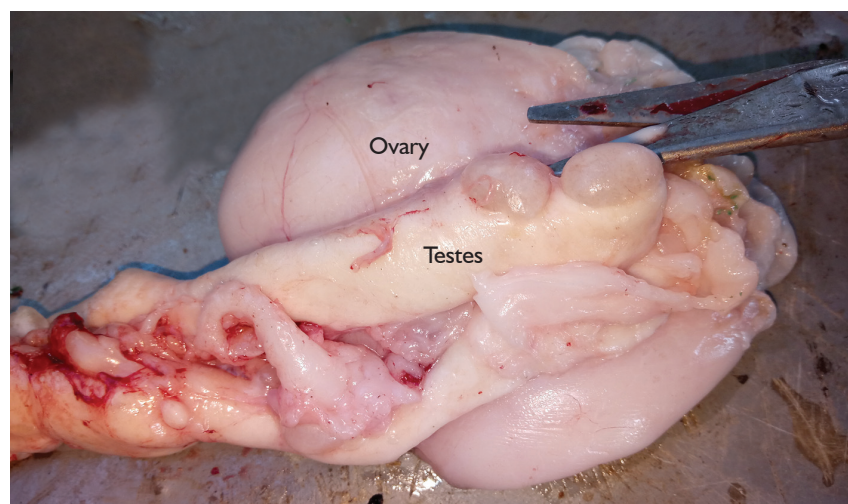


SEM IMAGE of *Trichodina* sp. infestation attached to the gill lamellae

Inter-sex recorded in cobia

Intersex gonads were reported in cobia from Indian waters for first time in the

normally gonochoristic fish species during necropsy of a brood stock cobia



Intersex cobia

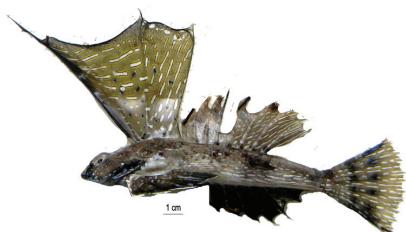
measuring 117cm and weighing 13.5 kg at Mandapam regional centre on 26th August, 2018. It showed excessive accumulation and deposition of the adipose tissue in the coelomic cavity. The reproductive organ was identified as male based on the gross appearance. In each lobe of testis a small transparent nodular polyp kind of growth was observed embedded over the testes. Histological sections revealed male tissue at the periphery, and ovarian tissue in the nodules.

(Reported by P. Rameshkumar, R. Jayakumar, G. Tamilmani, M. Sakthivel, B., K. K. Anikuttan, M. Sankar & A. K. Abdul Nazar)

Record of Indian ornate dragonet from Palk Bay

Synchiropus lineolatus which is commonly called Indian ornate dragonet was recorded from Palk Bay coast during a field survey. These fishes popularly known as dragonets belong to the *Callionymidae* family and are benthic in habit.

(Reported by Dr. R. Saravanan Mandapam Regional Centre)



Record of Indian ornate dragonet
Synchiropus lineolatus (Valenciennes,
1837) from Palk Bay

Ornamental shrimp from Thoothukudi coast

A pair of attractive Painted harlequin shrimp, *Hymenocera picta* Dana 1852, a marine ornamental was recorded from Thalamuthunagar region of Thoothukudi coast during a marine ornamental fish survey programme on 25th December, 2018. The total length and weight of the female and male shrimp was recorded as 46 mm, 4.18 g and 27 mm, 2.45 g respectively.



Sea ranching of green tiger shrimp in Gulf of Mannar

Green tiger shrimp *Penaeus semisulcatus* locally known as Thalai iral / flower iral forms a good commercial fishery resource in Gulf of Mannar and Palk Bay. Sea ranching programme of the same was initiated by Mandapam Regional centre of CMFRI to promote livelihood of fishermen. During 2017-18 a total of 1.7 million post-larvae

10-35 were released in the Gulf of Mannar and Palk Bay, with 3 million numbers planned for 2018-19. Thus on 28th December 2018, 5 lakh shrimp PL 15-30 size seeds were released near the seagrass beds of Kunthukal in Gulf of Mannar sea. Dr. R. Jayakumar and other scientists of Mandapam Regional Centre of ICAR-CMFRI, fishermen and leaders

of Fishermen associations, Cage farmers, Officials of State Fisheries Department, Press and Media were active in making the programme which was co-ordinated by Shri M. Sankar a big success.

(Reported by Mandapam Regional Centre)



Sea ranching programme implemented for Green tiger shrimp

Coral reef survey in Andaman Islands

Survey and documentation of several coral reef sites in Andaman Islands carried out in October using underwater photography and videography in two sites in Havelock island and one site in Wandoor in Port Blair. Significant feature was the very high density of giant clams in all three sites. Bleached and dead clams were also noticed at the sites.

(Reported by P. Laxmilatha)

Winter School on Climate change impacts on Indian marine fisheries

ICAR sponsored Winter School programme on 'Climate change impacts and resilience options for Indian marine fisheries' was organized by Demersal Fisheries Division from 8th to 29th November 2018. The programme was inaugurated by Dr. A.

Ramachandran, Vice Chancellor, KUFOS, Panangadu and presided over by Dr. A. Gopalakrishnan, Director, ICAR-CMFRI, Kochi. The third edition of Climcard was released on the occasion. Dr. P. U. Zacharia, Course Director and Dr. T. V. Sathianandan, Dr. P. Kaladharan

and Dr. T. M. Najmudeen coordinated the programme. 22 participants including scientists and faculty from various ICAR institutes and universities across the country attended the training. e-copy of the Winter School course manual was also released.



Participants of the Winter School with Dr. A. Gopalakrishnan Director, ICAR-CMFRI

- The Winter School on 'Recent Advances in Fishery Biology Techniques for Biodiversity Evaluation and Conservation' was organised from 1st to 21st December 2018 at CMFRI, Kochi. Dr C V Ananda Bose, former

Secretary, Govt. of India and Member - UN Habitat Governing Council inaugurated the programme. Dr. Rekha J. Nair, Course Director, Dr. V. Mahesh and Dr. Ambarish Gop, Co-

ordinated the programme. Participants from Jammu and Kashmir, Uttar Pradesh, Gujarat, Madhya Pradesh, Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala attended.



Inauguration of the Winter School by Dr. Ananda Bose

- ICAR sponsored short course on "Application of advanced molecular methods in marine fishery resource management, conservation and sustainable mariculture" was conducted during 24th October - 2nd November, 2018 with 22 participants.

Genetic and genomic technologies relevant to marine biology and fisheries were covered in the short course. Aspects like population genetics, population genomics, functional genomics, next generation sequencing methods, transcriptomics,

eDNA based estimation of marine biodiversity and metagenomics were covered and exposure to the latest technologies was the highlight of the programme.



Participants of the Short course on genomic technologies in fisheries

Review workshop organized

Demersal Fisheries Division organized a Review workshop during 30th-31st October, 2018 for the Project personnel of the project entitled

"Resource assessment and management framework for sustainable fisheries of Kerala (DEM/RMS/07)" and the subproject "Monitoring and assessment

of juvenile fishery along the coast of Kerala (DEM/RMS/SUB-07) at ICAR-CMFRI, Kochi.



Participants of Project Review Workshop

World Fisheries Day Celebration - 2018

As a part of the World Fisheries Day Celebration, the Marine Biological Association of India (MBAI) and Mandapam Regional Centre of ICAR-CMFRI organized Essay & Drawing competition for students on 22nd

November 2018. Prizes were distributed at the function organized on 14th December 2018 with Shri. R. N. Joe D'Cruz, Winner, Sahitya Akademi Award-2013, Novelist and Member, National

Shipping Board, Ministry of Shipping, Govt. of India as the chief guest who also gave a motivational lecture to the school students. Dr. Johnson, B., coordinated the programme.

Inauguration of Open water cage culture scheme

The open water cage culture project for Karnataka sponsored by the National Fisheries Development Board (NFDB) was inaugurated on 23rd November, 2018 at the Karwar Research Centre and in the function held at Nagnathwada, Karwar, Dr. Imelda Joseph, Head, Mariculture Division, launched 19 cages stocked with Asian seabass seeds. Dr. Jayasree Loka, Scientist-In-Charge of Karwar Research Centre, Mr. Sreepad Kulkarni, Assistant Director (Fisheries), Karwar were present. Under this project, a total of 500 cages are sanctioned (30% of the cages for SC/ST/Women category & rest for general category) for fishermen / fisherwomen / SHG's of three coastal districts of Karnataka. Galvanized iron



Launch of open water cage culture project funded by NFDB

(G.I.) cages of 4 X 4 X 3 m dimension for culturing Asian seabass and other selected species for a period of 6-8

months is planned. The project provides subsidy of 60% for SC/ST/Women category and 40% for general category.

New hatchery facilities come up at Vizhinjam Research Centre

Under the DADF-NFDB funded project on National Broodstock Facility for silver pompano the newly created hatchery facility at Vizhinjam Research Centre of ICAR-CMFRI was inaugurated by Ms. Rani Kumudini, IAS, Chief Executive, NFDB, on 8th December, 2018. This will help the fish farmers by providing a reliable source of quality seeds of silver pompano, a preferred mariculture species in India. Pamphlets on micro-nursery for seed production of green mussel and production of green mussel seed using micron meshed cages for spat rearing were also released on this occasion to



Ms. Rani Kumudini, IAS, Chief Executive, NFDB, inaugurating National Broodstock Facility for silver pompano



popularize and educate the stakeholders on the newly developed technologies in mussel farming. The micro-hatchery of the Vizhinjam Research Centre was earlier inaugurated by the Honourable Union Minister of State for Agriculture and Farmers Welfare Smt. Krishna Raj on 4th December, 2018.

Inauguration of the Micro-Hatchery

Stakeholders meeting on draft national mariculture policy

Stakeholders meet on National Policy Meeting (Draft) on Mariculture was held on 24th November, 2018 at Karwar Research Centre. The policy has been drafted with a vision for a sustainable development of mariculture sector which can contribute to nutritional security and socio-economic upliftment of coastal communities. Dr. Sreepada, Principal Scientist, National Institute of Oceanography (NIO), Goa & member of draft policy committee (NMP 2018) inaugurated the meeting. Dr. Jayasree Loka, Scientist-In-Charge, Karwar Research Centre presented the 19 sections of draft policy in detail and invited the audience for critical review and suggestions. Dr. Imelda Joseph and Dr. Pratibha Rohit, Scientist-In-Charge, Mangalore Research Centre were also

present. At the Mandapam Regional Centre it was held on 28th November 2018. Representatives of fishermen associations, NGOs (MSSRF, Reliance & DHAN Foundation), Mandapam Centre for Sustainable Aquaculture of Tamil Nadu Dr. J Jayalalitha Fisheries University (TNJFU), National Centre for Coastal Research, MoES, officials from State Fisheries Department, Indian Coast Guard, Coastal Police, Wildlife Crime Control Bureau, Gulf of Mannar Biosphere Reserve, Dept. of Forests and Marine Police participated and deliberated on the draft National Policy on Mariculture. Dr. G. Tamilmani, Senior Scientist delivered the welcome address. Dr. R. Jayakumar, Scientist in Charge chaired the consultation meeting and made a presentation on the salient points

of the draft policy.

The Madras Research Centre organized the meeting at Chennai on 3rd December 2018 for stakeholders from north Tamil Nadu. Several stakeholders from the districts of Thiruvallur, Chennai, and Kancheepuram, representatives from Government organizations including Fisheries Department, Tamil Nadu, National Institute of Ocean Technology (NIOT), Dr. MGR Fisheries College and Research Institute, Ponneri, Institute of Ocean Management, Anna University, Netfish MPEDA, Dept. of Fisheries and Fishermen Welfare, Central Aquaculture Authority, ICAR-CIBA, representatives from fisheries and aquaculture societies and fishermen associations and NGOs like ICSF, FPO and entrepreneurs were present.



Stakeholders discussions at Chennai



Dr. E. Kathavarayan, Deputy Director of Fisheries, Ramanathapuram interacting with the stakeholders

Study on effect of Gaja Cyclone by team of ICAR institutes

A team of scientists from various ICAR institutes viz., ICAR- SBI, ICAR-CPCRI, ICAR-CICR, ICAR-NRC Banana, ICAR-CMFRI and ICAR-CIBA was constituted on the directions of Dr. T. Mohapatra, Director-General, ICAR & Secretary, DARE to conduct a snap

survey and report preliminary actionable strategies in the Gaja cyclone affected regions of Tamil Nadu. Mr. M. Rajkumar and Dr. R. Narayanakumar, representing ICAR-CMFRI visited the Gaja cyclone affected regions in Tamil Nadu and gathered the secondary information from

the Fisheries Departments and based on this information, the estimated amount required for the restoration for the fishing activities in the coastal districts was ₹ 9,511.99 lakhs.



Glimpses of cyclone damages to fisheries sector in Tamil Nadu

Video film on Open water cage culture

A team led by Dr. R. Suresh, Advisor, from Agriculture Skill Council of India (ASCI) and members from Doordarshan (DD National) production team visited Karwar Research Centre of CMFRI for making a video on open sea cage culture and Mariculture. The team covered cage culture activities initiated by the centre at Kali estuary in association with Fisherman SHGs which was broadcast by Doordarshan in its weekly programme named "Hunnarbaaz".

Filming of cage culture aspects by Doordarshan team



Exhibition

- Karwar Research Centre participated in the exhibition organised as a part of the Karavali festival held at Karwar from 8th December to 10th December, 2018 and exhibited the models and charts related to marine aquaculture activities.
- Mumbai RC of ICAR-CMFRI participated in exhibition during 19th world congress of Food Science and Technology organized by International Union of Food Science and Technology (IUFOST) at CIDCO Convention Centre, Navi Mumbai from 23rd-27th, October 2018.

Training

A training programme on seed production and farming of Cobia and Silver pompano was organised from 23rd to 27th October 2018 to nine officials of the State fisheries department, Govt of Kerala. Dr. Anikuttan K. K, Dr P. Rameshkumar and Shri. M Sankar, Scientists Mandapam Regional Centre of ICAR-CMFRI coordinated the training programme.

- An NFDB-sponsored skill development Training programmes on "Open Sea Cage Farming and Mariculture" were organized for fisher youth in several places. The Madras Research Centre was organized one at Oyallikuppam village, Kancheepuram District during 25th-27th October 2018 and attended by 50 fishers from 10 villages. Karwar

Research Centre imparted training of three days duration for three batches of 50 trainees each of fisherfolks of Uttara Kannada and Udupi districts of Karnataka.

- Hands on Training programme on "Live Feed Production Technologies for Marine Finfish and Shellfish" with Dr. Ritesh Ranjan as the program coordinator was held at the Mandapam Regional centre during 26th November, 2018 to 1st December, 2018 attended by 25 participants.
- Under the NFDB funded project on "Enhancing production of farmed Pompano (*Trachinotus blochii*) through establishment of brood bank and supply of larvae to state for seed production" Vizhinjam Research Centre organized a 3 day training programme on Cage farming of commercially important finfishes was organized at the Thekkumbhagom Parish hall for stakeholders consisting of 50 fish farmers, fisherwomen and self-help groups from 25th October,



2018 to 27th October, 2018. 5000 fingerlings of Pompano were also distributed to fish farmers from Kollam district.

- A three days capacity building training program on "Fin fish and shellfish species identification and FRAD field data collection methodology" for the regular and newly hired contractual survey staff of West Bengal and Odisha was organized by Digha Research Centre at Puri Field Centre of ICAR-CMFRI during 13th to 15th November 2018. The hands on training on the identification of commercially important pelagic, demersal crustacean and molluscan species along with entry of field data on a newly introduced tablet base interface, is expected to improve the database used for fish landings estimation and related stock assessment works.
- Bivalve farming under the Fisheries Management and Sustainable Livelihood Project (FIMSUL - II, Component - II - 1008892) was undertaken in three sites namely Senjamman Nagar (Pazhaverkadu), Cuddalore Chinakuppam and Kottaikadu with technical guidance from Madras Research Centre of CMFRI, Chennai. The first partial harvest of bivalves - green mussels and oysters was done at Pazhaverkadu on 29th November, 2018 in the presence of Dr. G. S. Sameeran, IAS, Director of Fisheries, Government of Tamil Nadu. Department of Fisheries handed over the harvested bivalves to the progressive fish farmers led by Shri



Certificate distribution to trainees

T. K. Ramesh and T. K. Suresh. Following the harvest the process of depuration of mussels and oyster was demonstrated and hands on training was given to the fisherwomen. Dr. G. S. Sameeran, IAS, also distributed certificates to the trainees.

- A 3-day workshop under FIMSUL - II, Component - III on "Enhancing precision of species level estimation of marine fish landings" was conducted at the Madras Research Centre of ICAR-CMFRI from 13th-15th November 2018. FRAD staff from Madras, Mandapam and Tuticorin Regional Centres and the Field Centres at Cuddalore, Nagapattanam, Pattukottai and Kanyakumari attended the workshop.
- The On -the -Job (OJT) training programme on "Advances in mariculture techniques" was conducted for the Fisheries vocational higher secondary students through

ATIC from 9th to 25th, 2018. 50 students belonging to coastal fisherfolk communities from the Vocational higher secondary schools of Arthungal and Narakkal benefitted through the training programme. Dr. N. Aswathy, Senior Scientist and Smt. K. P. Salini, Senior Technical Officer co-ordinated the programme.

- A one day awareness programme on 'Conservation of protected elasmobranch species of India-with an importance to protected species under the Indian Wildlife (Protection) Act (IWPA) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species' was organized by Digha Research Centre on 22nd November, 2018 with field, identification key and colour photographs. The 'save our sharks' brochure translated in Bengali were distributed to all the participants.



Bivalve harvest under FIMSUL-II project



Awareness programme on Conservation of elasmobranchs at Digha Research Centre

Official Language Implementation

- Dr. P. Pravin, Assistant Director General (Fisheries), Shri M. L. Gupta, Deputy Director (OL) and Shri Manoj Kumar, ACTO (OL) inspected the Official Language activities of Madras Research Centre on 3rd November, 2018.
- Dr. P. Pravin, ADG (Fisheries) inspected the progress of Official Language implementation at Mangalore Research Centre on 12th November, 2018.

Hindi Competitions

- In connection with Joint Hindi Celebration-2018 Hindi song and Hindi typing competitions were conducted at Headquarters on 29th November, 2018 where participants from Member Organisations attended. Dr. J. Jayasankar and Smt. Vandana V.won prizes.
- Mumbai Research Centre celebrated Hindi Pakhwada 2018 during 14th September 2018 to 30th October, 2018 at centre and conducted various activities to promote the official language. Prize distribution and valedictory function were conducted on 31st October 2018.

Hindi workshops

- Conducted on 17th December, 2018 at ICAR-CMFRI Headquarters in Kochi
- Conducted on 9th October, 2018, at Madras Research Centre
- Conducted on 26th December, 2018 at Karwar Research Centre

Swachh Bharat Activities

"Swatchta hi Sewa hai" was observed with enthusiasm at headquarters and the various regional research centres of the institute. The institute's cleanliness campaign started at Headquarters and regional research centres by administering of oath by Director and SICs respectively. It was observed at Karwar Research Centre from 15th September, 2018 to 2nd October, 2018. Cleanliness campaign was organized both

inside and outside the office premises at Baithkol and Kodibag which included weed removal, collection of plastic and glass waste. Beach cleaning at Aligadda was also taken up. Visakahapatnm Regional centre observed same from 16th December, 2018 to 31st December, 2018. Swachhta pledge was taken during the celebrations and regular cleaning of the campus was undertaken. An awareness walk and cleaning of nearby

tourist place and R K Beach was carried out by the staff members of the centre. Awareness campaign and cleaning up of beaches in selected fishing villages was conducted by staff of Madras Research centre in which the village women also participated. Mumbai Research centre conducted cleanliness activities at residential places, fishermen villages, fish landing centre, public places, including playgrounds, temple and beaches and also organized a painting competition for school students at Posha Nakhawa, BMC School, Versova. Mandapam Regional Centre conducted the cleanliness drive from 15th December, 2018 to 31st December 2018 with active participation of all staff in cleaning activities in office premises, residential quarters, finfish hatchery and Marine Fish Farm; Swachhta Pakhwada awareness campaign in Marakayarpattinam and Pamban villages; door to door meeting with people to create awareness on sanitation at Pamban Therkuvadi village and distribution of pamphlets on cleanliness, sanitation & hygienic environment practices (in Tamil and English language) to local residents and tourists in Pamban.



Swachh bharath pledge at Headquarters



Painting competiton and awareness campaigns for students held at Mumbai



Campus cleaning at Mandapam Regional Centre



Beach cleaning at Mandapam



Ernavoor Kuppam



Cleaning of campus at Puri Field Centre

Technical backstopping for cage fish farming

KVK extended technology backstopping on cage fish farming two trainings were conducted for the fifteen Self Help groups sponsored by Palliyakkal Co-operative Bank, Ezhikkara. Further, under the Aqua task force of KVK, Kadamakkudy Malsya Krishi Karma sena farming of Asian Seabass and Pearls spot commenced in 15 cages. KVK also extended marketing support by



Harvest of cultured fish for farm gate sales

implementing farm gate market on 23rd December 2018 at Chathanad where 2000 kg of live fish harvested was sold

directly to consumers. Farmers got 35% additional income from this intervention alone.

Orientation programme for newly recruited staff of KVK Lakshadweep

ICAR - Krishi Vigyan Kendra (Ernakulam) of CMFRI conducted an orientation training program for the newly recruited staff of ICAR- Krishi Vigyan Kendra (Lakshadweep) during 26th November 2018 to 1st December 2018 at ICAR-CMFRI, Kochi. The topics included Technology testing, assessment, demonstrations and training, handling KVK database, portal and reporting, working with farmers, organizations and technology providers, field visits, communicating to farmers and developing KVK projects, Revolving fund utilization, charting success stories and mass media popularization. The

participants also visited farmers' fields and ICAR - CPCRI, Regional station,

Kayamkulam as part of their orientation training.



Participants of the Technical Orientation Programme organised

Awards and Recognitions

Mr. Ratheesh Kumar R., was awarded Dr. K. Ravindran Memorial Award for best paper in Fisheries Science at Swadeshi Science Congress 2018, jointly organized by swadeshi Science Movement-Kerala and National Institute for Interdisciplinary Science and Technology (CSIR- NIIST), Thiruvananthapuram, Kerala during 7th- 9th November, 2018.



- Mr. Subal Kumar Roul, Scientist was awarded Ph.D degree on 3rd December 2018 for the research thesis on "Taxonomic revision of family Belontiidae, and biology and stock assessment of *Ablennes hians* (Valenciennes, 1846) along Kerala coast" by ICAR-Central Institute of Fisheries Education, Mumbai.



- Ms. Jasmin F, Scientist, Molluscan Fisheries Division was awarded Ph.D degree on 6th October, 2018 ICAR-CIFE, Mumbai for the research thesis titled "Fishery, distribution, biology and exploitation status of *Sepia aculeata* Van Hasselt, 1835 off Andhra coast."



- **Dr. A. Gopalakrishnan**, Director, attended the meeting on 'Blue Economy Working Group 3 (Fisheries Aquaculture and Fish Processing) at NITI Aayog Bhawan, New Delhi on 8th October 2018.

Participated in the ASRB-CAS meeting at ASRB, New Delhi on 29th & 30th October 2018.

Attended the meeting with the Chairman, Working Group-III, EAC to the Prime Minister and discussed on the preparation of draft Report on Blue Economy: Fisheries, Aquaculture & Fish Processing at New Delhi on 28th & 29th November 2018.

Attended NFDB Project Review meeting with the Chief Executive, NFDB at Vizhinjam Research Centre of IFAR-CMFRI on 8th & 9th December 2018.

Attended the meeting with DG, ICAR and DDG (FS), ICAR at Delhi to discuss on the amalgamation of Mumbai Research Centre of ICAR-CMFRI on 11th & 12th December 2018.

- **Dr. R. Narayanakumar**, attended the Consultative Meeting with Training Providers for Skill Development Training Programme for fisher folk at the Department of Fisheries, Government of Tamil Nadu, Chennai on 16th October 2018.

Attended a skill development training programme on Open Sea Cage Farming and Mariculture conducted at Oyallikuppam, Kancheepuram District during 25th-27th October 2018.

Participated in the rapid assessment of the Gaja cyclone damage in the coastal districts of Tamil Nadu covering Cuddalore, Puducherry, Karaikal and a part of Nagapattinam during 20th-21st November 2018, as a member of the team convened by ICAR-Sugarcane Breeding Institute, Coimbatore (under ICAR Regional Committee No.VIII).

Attended the Review Meeting of the FIMSUL-II Component 2 (Bivalve

Farming) and Component 3 (Fisheries Management) Department of Fisheries, Government of Tamil Nadu, 22nd November 2018.

Attended the Project Review Workshop of the KSBB funded project 'Valuation of marine and coastal ecosystem in Kadalundi Community Reserve of Kerala' at the Calicut Research Centre of ICAR-CMFRI on 07 December 2018.

Attended the 85th IMC Meeting at institute Headquarters, Cochin on 22nd December, 2018.

- **Dr. P. Laxmilatha**, **Dr. R. Narayanakumar**, **Shri D. Pugazhendhi** and **N. Rudhramurthy** attended the Review Meeting of the FIMSUL-II Component 2 (Bivalve Farming) and Component 3 (Estimation of marine fish landings) at Department of Fisheries, Government of Tamil Nadu, Chennai on 22nd November 2018.
- **Dr. P. Laxmilatha**, delivered a lecture on "Threats to critical marine ecosystems and vulnerable species" at the Capacity Building Course (CBC) conducted by BOBP-IGO for officials of the Government of Sri Lanka on Sustainable Development Goal 14: Life Below Water, on 24th November 2018.
- **Dr. Shoba Joe Kizhakudan**, delivered a lecture on "Adaptation and mitigation options for climate change" at the BOBP sponsored Capacity Building Course for officials of the Government of Sri Lanka on Sustainable Development Goal 14: Life Below Water, in Chennai on 30th November 2018.
- **Dr. Johnson, B.**, participated in the meeting to discuss about the prospects of seaweed cultivation in India at NITI Aayog, New Delhi on 17th October 2018.
- **Dr. Josileen Jose**, Principal Scientist, CFD, participated in the training programme sponsored by DST "Science Administration & Research Management" at Administrative Staff College of India (ASCI) Hyderabad during October 22nd to November 2nd 2018.

Dr. Srinivasa Raghavan V., attended a one day workshop on "Knowledge Management in Marine Fisheries Sector", conducted by BOBP- IGO on 12th October 2018 at Chennai.

- **Dr. R. Saravanan**, participated in the International Biodiversity Conference held at Forest Research Institute, Dehradun during 4th-6th October 2018.
- **Shri. M. Sankar**, attended ToT on Aquaculture worker conducted by Agricultural skill council of India(ASCI) held at Banda University of Agriculture and Technology (BUAT), Banda, Uttar Pradesh during 15th-17th October, 2018.
- **Dr. Anulekshmi Chellappan** participated in 127th and 128th meeting of Maharashtra Coastal Zone Management Authority (MCZMA), Mantralaya, Mumbai - 400 032 on 2nd November, 2018 and 20th December, 2018.
- **Dr. Akhilesh K. V.** coordinated awareness programme on "Conservation of Elasmobranchs and other Protected marine fauna understanding fisher's perceptions" at Malvan, Sindhudurg on 31st October, 2018.
- **Shri. Ajay D. Nakhawa** attended discussion on "Memorial and statue of Chatrapati Shivaji Maharaj off Marine drive" at office of the commissioner of fisheries, Dept. of Fisheries, Govt. of Maharashtra on 23rd October, 2018.
- **Shri. Santosh N. Bhendekar** attended meeting with Commissioner of Fisheries, Government of Maharashtra and fisheries department officials at Taraporewala Aquarium regarding Aquascaping on 4th October, 2018.
- **Dr. Ramkumar R.** attended International biodiversity congress (IBC) 2018 at Forest Research Institute, Dehradun from 4th October, 2018 to 6th October, 2018.
- **Dr. Ramkumar** and **Shri. Ajay D. Nakhawa**, participated in a joint awareness programme, on conservation of Endangered, Threatened and Protected Marine Mammals and Turtles

- with Rufford Fellow on 31st October, 2018.
- Dr. Shubhadeep Ghosh participated in a meeting with Shri Tarun Shridhar, Secretary, DADF, Govt. of India on fisheries and aquaculture at Vijayawada on 12th November, 2018.
 - Dr. Sekar Megarajan, attended the district level committee meeting on finalization of Aqua Zonation in Srikakulam District and Vizianagaram District at District Collector's office on 3rd December, 2018 and 7th December, 2018 respectively.
 - Dr. S. S. Raju, Shri Pralaya Ranjan Behera, Dr. Jasmin F., Dr. Indira Divipala and Dr. Manas H. M., attended "Sea food Import Monitoring Programme (SIMP)" organized by MPEDA, Visakhapatnam on 10th October, 2018.
 - Dr. Jayasree Loka, Dr. Shubhadeep Ghosh, Dr. Ritesh Ranjan and Dr. Sekar Megarajan attended 6th international Symposium on cage culture in Asia 2018 (CAA6) held at Surat Than, Bangkok, Thailand during 12th to 15th October, 2018.
 - Dr. P. S. Swathi lekshmi participated in the International Conference 'Gender in Aquaculture and Fisheries: Expanding the Horizons', in GAF-7 at the Asian Institute of Technology (AIT) campus, Klong Luang, Pathumthani, Bangkok, Thailand from 18th - 20th October, 2018 and presented a paper.
 - Dr. V. Mohan attended "International Workshop on Impact Factor Publications, Citation analysis, Plagiarism, getting patent and Copyright" held at Manonmaniam Sundaranar University, Tirunelveli during 7th-8th December, 2018.

Personnel

PROMOTIONS			
Name & Designation	Promoted as	Centre	w.e.f
Dr. G. Tamilmani, Scientist	Senior Scientist	Mandapam Regional Centre	07.01.2017
Dr. M. Sakthivel, Scientist	Senior Scientist	Mandapam Regional Centre	08.01.2017
Dr. Ritesh Ranjan, Scientist	Senior Scientist	Visakhapatnam Regional Centre	09.03.2017
Dr. Suresh Babu P. P., Scientist	Senior Scientist	Karwar Research Centre	07.01.2017
Dr. Shinoj P., Scientist	Senior Scientist	ICAR-CMFRI, Kochi	12.06.2016
Mrs. P.K. Anitha, Personal Assistant	Private Secretary	ICAR-CMFRI, Kochi	15.11.2018
Mr. G.D. Nataraja, Senior Technical Assistant	Technical Officer	Mangalore Research Centre	05.07.2017
Mr. M. Chaniappa, Senior Technical Assistant	Technical Officer	Mangalore Research Centre	06.08.2017
Mr. P. Jaiganesh, Senior Technical Assistant	Technical Officer	Madras Research Centre	01.01.2018
Mr. Vijayakarhikeyan, Senior Technician (Electrician)	Technical Assistant (Electrician)	Mandapam Regional Centre	07.07.2016
Mr. P.R. Abhilash, Senior Technician (Exhibition Assistant)	Technical Assistant (Exhibition Assistant)	ICAR-CMFRI, Kochi	05.04.2017
Mr. S.M. Sikkander Batcha, Technician	Senior Technician	Pattukottai Field Centre	01.06.2017
Mr. V. H. Venu, Technician	Senior Technician	ICAR-CMFRI, Kochi	02.07.2017
Mr. I. Syed Sadiq, Technician	Senior Technician	Mandapam Regional Centre	01.12.2017
Mr. M. Bareen Mohammed, Technician	Senior Technician	Madras Research Centre	15.12.2017
Mrs. P. Renuka, Technician	Senior Technician	Calicut Research Centre	01.01.2018
Mrs. J. Sudhadevi, Technician	Senior Technician	ICAR-CMFRI, Kochi	02.01.2018
Mr. K. Murugan, Technician	Senior Technician	Tuticorin Research Centre	01.02.2018
Mr. Makwana Somapitha, Technician	Senior Technician	Jamnagar Field Centre	02.02.2018

Mr. D. Bhaskara Rao, Technician	Senior Technician	Visakhapatnam Regional Centre	02.02.2018
Mr. D. Jaganna, Technician	Senior Technician	Visakhapatnam Regional Centre	30.04.2018
Mr. V. Muniyasamy, Technician	Senior Technician	Mandapam Regional Centre	30.04.2018
Mrs. Pramila Harish Borkar, Technician	Senior Technician	Karwar Research Centre	01.06.2018
Mrs. Sheela P. P., Technician	Senior Technician	ICAR-CMFRI, Kochi	01.06.2018
Mrs. Shyamala M. P., Technician	Senior Technician	ICAR-CMFRI, Kochi	01.06.2018
Mr. Sunil P. V., Technician	Senior Technician	ICAR-CMFRI, Kochi	01.06.2018
Mr. Shaji A. K., Technician	Senior Technician	ICAR-CMFRI, Kochi	01.06.2018
Mr. Jestin Joy K. M.	Senior Technician	ICAR-CMFRI, Kochi	01.07.2018
Mrs. B. Koncies Mary, Technician	Senior Technician	Tuticorin Research Centre	01.07.2018
Mr. C. H. Moshe, Technician	Senior Technician	Visakhapatnam Regional Centre	01.07.2018

TRANSFERS

Name & Designation	From	To	w.e.f
Mr. Abdul Hakeem M. M., Skilled Support Staff	Mangalore Research Centre	KVK, ICAR-CMFRI, Lakshadweep	01.10.2018
Mrs. Shajala Banu P. M., Skilled Support Staff	ICAR-CMFRI, Kochi	KVK, ICAR-CMFRI, Lakshadweep	04.10.2018

INTER-INSTITUTIONAL TRANSFER

Name & Designation	From	To	w.e.f.
Mr. Mayank Pratap Singh, Skilled Support Staff	Mumbai Research Centre	ICAR-NBFGR, Lucknow	06.10.2018 (AN)

RETIREMENTS ON VRS

Name	Designation	w.e.f	Centre
Mr. Kishor Raghunath Mainkar	Technical Officer	01.11.2018	Ratnagiri Field Centre

REVERSION

Name	Designation	w.e.f	Centre
Mr. M. K. Anilkumar, Technician	Skilled Support Staff	08.11.2018	ICAR-CMFRI, Kochi

RESIGNATION

Name	Designation	w.e.f	Centre
Ms. Bharadiya Sangita Aravindkumar	Senior Technical Assistant	17.10.2018 (AN)	Veraval Regional Centre

RETIREMENTS ON SUPERANNUATION



Dr. K. Vijayakumaran
Principal Scientist
31.10.2018
Madras Research Centre



Mrs. N. Gomathy
Private Secretary
31.10.2018
Mandapam Regional Centre



Mr. M. Ravindran
Senior Technician
30.11.2018
Madras Research Centre



Mr. D. Prakasan
Senior Technical Assistant
31.12.2018
ICAR-CMFRI, Kochi



Swachh Bharat Wall Art in ICAR-CMFRI Campus

Page - 14



cadalmin

CMFRI Newsletter

Cadalmin, the CMFRI Newsletter is a quarterly publication of the Central Marine Fisheries Research Institute, Kochi. The publication gives an insight into the major events of the quarter, besides highlighting the salient findings in the research front and dissemination of technological know-how to the farming community.